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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,118	09/30/2003	Mamdouh M. Salama	18326/04901	6052

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EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,118

Applicant(s)

SALAMA, MAMDOUH M.

Examiner

Marc A. Patterson

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION
WITHDRAWN OBJECTIONS

1. The objection to Claim 18, of record on page 2 of the previous Action, is withdrawn.

NEW REJECTIONS

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 – 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Salama et al (Offshore Technology Conference, May 1999).

With regard to Claims 1 – 2, Salama et al disclose a riser (page 2, column 2) that is collapse resistant (comprising titanium; page 3, column 1) comprising a metal liner (titanium liner; page 4, column 1), a reinforcing layer adjacent the outside of the liner (innermost layer of a structural composite overlayer comprising E – glass reinforcing fiber; page 4, column 2), a shear ply over the reinforcing layer (at the interface between the liner and structural overwrap) and an outer main structural layer of composite material over the shear ply layer (structural component overwrap; page 4, column 2).

With regard to Claim 3, Salama et al discloses a performance enhancement layer on the inside of the liner (elastomeric liner to insure leak tight conditions, therefore enhancing performance of the riser; page 4, column 2).

With regard to Claim 4, Salama et al disclose a fluid impermeable layer over the main outer layer over the outer main layer of composite material (external liner of HNBR; page 5, column 1).

With regard to Claim 5, Salama et al disclose a scuff absorbing layer over the fluid impermeable layer (page 5, column 1).

With regard to Claim 6, the liner disclosed by Salama et al comprises titanium (page 4, column 2).

With regard to Claims 7 – 8, the liner disclosed by Salama et al is adjacent to a layer, as discussed above, and the liner therefore comprises an engaging surface on its outer surface.

With regard to Claim 9, the scuff absorbing layer disclosed by Salama et al is of composite material (layer is glass overwrap; page 5, column 1).

With regard to Claims 10 – 17, the metal liner disclosed by Salama et al has a first end and a second end, and metal composite interfaces are positioned adjacent the first and second ends of the liner (a metal composite interface is the region where the structural composite overwrap overlaps the titanium pipe end section, therefore the ends of the titanium liner; page 4, column 2).

With regard to Claim 18, the riser disclosed by Salama et al comprises a transition ring which is interposed between an end of the liner and a metal composite interface as shown in Figure 3.

With regard to Claims 19 – 21, the shear ply disclosed by Salama et al has a generally Y – shaped portion that is received in grooves of the metal composite interface as shown in Figure 3, therefore a sealing section.

With regard to Claims 22 – 26, the metal composite interface disclosed by Salama et al has trap locks positioned at each end of the metal liner and engaging the layer of composite material (load transfer between the composite overwrap and titanium flange sections is accomplished through a carefully designed traplock metal to composite interface; page 1, column 1).

With regard to Claims 29 – 30, 32 – 33 and 35 – 36, the performing – enhancing layer of Salama et al comprises hydrogenated acrylonitrile butadiene rubber (the elastomeric liner comprises hydrogenated acrylonitrile butadiene rubber; page 2, column 1).

With regard to Claims 38 – 40, collapse from ambient pressure is not disclosed by Salama et al; the claimed aspect of the reinforcing layer being constructed so as to provide sufficient hoop strength to avoid collapse from the ambient pressure encountered in use is therefore disclosed by Salama et al; furthermore, the claimed aspect of the reinforcing layer being constructed so as to provide sufficient hoop strength to avoid collapse from the ambient pressure encountered in use is directed to an intended use of the reinforcing layer, rather than a structural limitation, and is therefore given little patentable weight.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 27 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salama et al (Offshore Technology Conference, May 1999) in view of Shetterly et al (U.S. Patent No. 2,957,794).

Salama et al disclose a hose comprising an epoxy layer, having a titanium liner having an engaging surface which is bonded to epoxy, as discussed above. With regard to Claims 27 – 28, Salama et al fail to disclose a titanium liner having one or more raised areas on the outer surface and having one or more depressions on the outer surface.

Shetterly et al teaches the roughening of a metal surface which is bonded to epoxy for the purpose of obtaining an improved bond between the metal and epoxy (column 1, lines 55 – 61). One of ordinary skill in the art would therefore have recognized the advantage of providing for the roughening of Shetterly et al in Salama et al, which comprises a metal surface which is bonded to epoxy, depending on the desired bonding of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a surface which is roughened in Salama et al in order to obtain an improved bond between metal and epoxy as taught by Shetterly et al.

6. Claims 31, 34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salama et al (Offshore Technology Conference, May 1999) in view of Halladay (U.S. Patent Application Publication 2003/0152790).

Salama et al disclose a performance enhancing layer comprising hydrogenated acrylonitrile butadiene rubber as discussed above. With regard to Claims 31, 34 and 37, Salama et al fail to disclose a performance enhancing layer comprising a corrosion resistant metal.

Halladay teaches a hydrogenated acrylonitrile butadiene rubber (paragraph 0015) comprising a filler comprising a corrosion resistant metal (copper powder; paragraph 0087) for the purpose of obtaining a rubber which is pigmented (the powder is a pigment; paragraph 0087). One of ordinary skill in the art would therefore have recognized the advantage of providing for the corrosion resistant metal of Halladay in Salama et al, which comprises hydrogenated acrylonitrile butadiene rubber, depending on the desired pigmentation of the end product. It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a performance enhancing layer comprising a corrosion resistant metal in Salama et al in order to obtain a rubber which is pigmented as taught by Halladay.

ANSWERS TO APPLICANT'S ARGUMENTS

7. Applicant's arguments regarding the 35 U.S.C. 102(b) rejection of Claims 1 – 26 as being anticipated by Salama et al (Offshore Technology Conference, May 1999), of record in the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 9 of the remarks dated November 14, 2005, that Salama et al do not disclose a reinforcing layer which is adjacent to the outside of the metal liner, because the structural composite disclosed by Salama et al is separated from the metal liner by a shear ply.

However, although the shear ply separates the structural composite from the metal liner, the metal liner and the structural composite are adjacent because only one ply separates the

reinforcing layer and liner; the reinforcing layer and the liner are therefore not distant from each other.

Applicant also argues on page 9 that Salama et al do not disclose a reinforcing layer or the material of construction of such a layer.

However, as stated above, Salama et al disclose a reinforcing layer comprising epoxy, and therefore disclose a material of construction.

Applicant also argues on page 9 that Salama et al do not disclose engaging surfaces as used in the specification in paragraph 19.

However, interpretation of the claim for purposes of examination is not limited to the definition of the specification.

Applicant also argues on page 9 that Salama et al do not disclose a generally Y – shaped portion that is received in grooves of the metal composite interface.

However, Figure 3 of Salama et al discloses in Figure 3 that the shear ply is full length; the shear ply therefore overlaps the transition ring disclosed by Salama et al, and therefore has a sloped portion joined with a horizontal portion as shown in Figure 3; the shear ply therefore forms a general Y – shape with the inside of the transition ring; the shear ply is also received in grooves of the metal composite interface as shown in Figure 3.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497. The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marc Patterson 2/6/06

Marc A. Patterson, PhD.
Examiner
Art Unit 1772